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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,569	02/27/2002	Hideshi Fukutani	2002_0213A	5898

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WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER

PEREZ, GUILLERMO

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 12/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/083,569

Applicant(s)

FUKUTANI, HIDESHI

Examiner

Guillermo Perez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 22-24, and 31-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Muller (U. S. Pat. 4,717,850).

Referring to claim 22, Muller discloses a motor comprising:

a bracket including:

a mounting base (36) for mounting the motor to an apparatus;

a bearing housing fixed to the bracket;

a metal (37) contained in the bearing housing, wherein the metal (37) is to be impregnated with oil (34);

a stator (10) on an outer wall of the bearing housing, the stator (10) including a stator core (11) with a coil (24) therearound;

a rotor (40) including:

a frame (42) having in a top surface thereof through-holes,

a shaft (39) fixed to the frame (42), and

a rotor magnet (43) fixed to the frame (42); and

an attracting magnet (24, *"a mass of iron, steel, or alloy that has this property artificially imparted"* Merriam-Webster's Collegiate Dictionary Tenth Edition) for

magnetically attracting the frame (42), the attracting magnet (24) being on an end face of the stator core (11) such that the attracting magnet (24) faces the through-holes and is axially spaced from the through-holes.

Referring to claims 23 and 32, Muller discloses oil (34) impregnated within the metal (37). Referring to claim 23, Muller discloses that the frame (42) includes a cylindrical section integrated with the frame and extending from a central portion of the frame toward the metal (37).

Referring to claim 31, Muller discloses an apparatus comprising:

a housing (see references incorporated by reference); and

a motor mounted within the housing via a mounting base (36), wherein the motor includes:

a bracket including the mounting base (36),

a bearing housing fixed to the bracket,

a metal (37) contained in the bearing housing, wherein the metal (37) is to be impregnated with oil (34),

a stator (10) on an outer wall of the bearing housing, the stator (10) including a stator core (11) with a coil (24) therearound,

a rotor (40) including:

a frame (42) having in a top surface thereof through-holes,

a shaft (39) fixed to the frame (42), and

a rotor magnet (43) fixed to the frame (42), and

an attracting magnet (24) for magnetically attracting the frame (42), the attracting magnet (24) being on an end face of the stator core (11) such that the attracting magnet (24) faces the through-holes and is axially spaced from the through-holes.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muller.

Muller substantially teaches the claimed invention except that it does not show that the attracting magnet comprises a sintered magnet of Neodymium-Iron-Boron system.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the specified magnet material since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

3. Claims 13-16, 18-19, 21, 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted Prior Art (AAPA) in view of Oku (U. S. Pat. 5,831,355).

Referring to claims 13-61, AAPA discloses a motor comprising:

a bracket defining:

a bearing housing (123); and

a mounting base (104) for mounting the motor to an apparatus;

a metal (105) fixed to an inner wall of the bearing housing (123), wherein the metal (105) is to be impregnated with oil;

a stator on an outer wall of the bearing housing (123), the stator including a stator core (114) with a coil (106) therearound;

a rotor (111) including:

a frame (102) having in a top surface thereof through-holes (116),

a shaft (101) fixed to the frame (102), and

a rotor magnet (103) fixed to the frame (102).

AAPA discloses that the bracket defines the bearing housing (123) and the mounting base (104) by having the bearing housing (123) and mounting base (104) be unitarily formed with the bracket. AAPA discloses oil impregnated within the metal (104). AAPA discloses that the bearing housing (123) comprises a first cylindrical section integrated with the bracket and extending from a central portion of the bracket toward the top surface of the frame (102), and the frame (102) includes a second cylindrical section integrated with the frame (102) and extending from a central portion of the frame (102) toward the metal (105).

Referring to claims 26-29, AAPA discloses an apparatus comprising:

a housing; and

a motor mounted within the housing via a mounting base, wherein the motor includes:

- a bracket defining the mounting base and a bearing housing,

- a metal fixed to an inner wall of the bearing housing, wherein the metal is to be impregnated with oil,

- a stator on an outer wall of the bearing housing, the stator including a stator core with a coil therearound,

- a rotor including:

 - a frame having in a top surface thereof through-holes,

 - a shaft fixed to the frame, and

 - a rotor magnet fixed to the frame.

However, AAPA does not disclose a cap facing the through-holes and spaced axially from the through-holes, the cap being spaced from an outer circumference of the metal and being axially spaced from an end face of the metal, and also being fixed at an internal circumference of the stator core.

AAPA does not disclose that the cap is spaced from an outer circumference of the metal such that a radial gap is defined between an outer wall of the metal and an inner wall of the cap. AAPA does not disclose that the cap comprises a magnetic material, and further comprising an attracting magnet positioned outside of the cap. AAPA does not disclose that the cap includes a lower end surface and the bearing housing includes a upper end surface in contact with the lower end surface of the cap.

Oku discloses a cap (8) facing the through-holes (72) and spaced axially from the through-holes (72), the cap (8) being spaced from an outer circumference of the metal (20) and being axially spaced from an end face of the metal (20), and also being fixed at an internal circumference of the stator core (52).

Oku discloses that the cap (8) is spaced from an outer circumference of the metal (20) such that a radial gap is defined between an outer wall of the metal (20) and an inner wall of the cap (8). Oku discloses that the cap (8) comprises a magnetic material, and further comprising an attracting magnet (12) positioned outside of the cap (8). Oku's invention has the purpose of providing support to the rotor and facilitating the press-forming process of the embodiment.

It would have been obvious at the time the invention was made to modify the motor of AAPA and provide it with the cap configuration disclosed by Oku for the purpose of providing support to the rotor and facilitating the press-forming process of the embodiment.

4. Claims 17, 20 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Oku as applied to claims 15, 19, and 26 above, and further in view of Moritan et al. (U. S. Pat. 5,822,846).

AAPA and Oku substantially teaches the claimed invention except that it does not show that the end portion having an end face defining an inner diameter that is less than an inner diameter of the body portion. Neither AAPA nor Oku disclose that the bearing housing includes an upper end surface in contact with the lower end surface of the cap.

Moritan et al. disclose that the end portion have an end face defining an inner diameter that is less than an inner diameter of the body portion (26). Moritan et al. disclose that the bearing housing (23a) includes a upper end surface in contact with the lower end surface of the cap (26). The invention of Moritan et al. has the purpose of limiting the axial movement of the rotor.

It would have been obvious at the time the invention was made to modify the motor of AAPA and Oku and provide it with the cap configuration disclosed by Moritan et al. for the purpose of limiting the axial movement of the rotor.

Response to Arguments

Applicant's arguments with respect to claims 13-32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3432 for regular communications and (703) 305 3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

Guillermo Perez
December 16, 2002



TRAN NGUYEN
PRIMARY EXAMINER